

# EXHIBIT 21

**IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF MASSACHUSETTS**

ASSOCIATION OF AMERICAN  
UNIVERSITIES,

AMERICAN COUNCIL ON EDUCATION,

ASSOCIATION OF PUBLIC AND LAND-  
GRANT UNIVERSITIES,

AZ BOARD OF REGENTS ON BEHALF OF  
ARIZONA STATE UNIVERSITY,

BROWN UNIVERSITY,

CALIFORNIA INSTITUTE OF TECHNOLOGY,

THE REGENTS OF THE UNIVERSITY OF  
CALIFORNIA,

CARNEGIE MELLON UNIVERSITY,

CORNELL UNIVERSITY,

BOARD OF TRUSTEES OF THE UNIVERSITY  
OF ILLINOIS,

MASSACHUSETTS INSTITUTE OF  
TECHNOLOGY,

REGENTS OF THE UNIVERSITY OF  
MICHIGAN,

REGENTS OF THE UNIVERSITY OF  
MINNESOTA,

UNIVERSITY OF PENNSYLVANIA,

TRUSTEES OF PRINCETON UNIVERSITY,

Plaintiffs,

v.

Case No. 1:25-cv-11231

**DECLARATION OF  
SHASHANK PRIYA**

NATIONAL SCIENCE FOUNDATION, and  
BRIAN STONE, in his official capacity as Acting  
Director of the National Science Foundation,  
  
Defendants.

I, Shashank Priya, declare as follows:

1. I am the Vice President for Research and Innovation at the University of Minnesota (Minnesota) in Minneapolis, Minnesota; the University has campuses in Hennepin County and four other counties within Minnesota. I have held that position since September 2022. Prior to that time, I served as Associate Vice President for Research at The Pennsylvania State University.

2. I have personal knowledge of the contents of this declaration or have knowledge of the matters based on my review of information and records gathered by Minnesota personnel, and could testify thereto.

3. Minnesota receives substantial annual funding from the National Science Foundation (“NSF”). At the present time, Minnesota holds 543 active direct NSF grant and cooperative agreement awards valued at more than \$387M in total costs. In addition, Minnesota serves as a partner to other NSF recipients via 81 subawards with additional funding of \$25M. In FY24 Minnesota received 214 new awards valued at \$83.2M. In the first ten months of FY25 Minnesota has received 195 new awards with \$65.2M in new award funding. Minnesota’s fiscal year (FY) covers the period between July 1 to June 30.

4. Minnesota intends to apply for new funding awards, and/or renewals and continuations of existing funding awards, in the next FY and in future FYs to come.

5. The funding Minnesota receives from NSF supports critical and cutting-edge research vital to our nation's physical and economic security. Millions of Americans benefit from and depend on this research. For example:

a. Semiconductor research, including research on quantum technologies and novel storage and processing technologies to support artificial intelligence. These technologies are key to American computer companies being able to remain competitive in the development of the next generation of technologies.

b. Materials research, including the behavior of materials under significant heat, chemical, and acceleration stresses and the design of new materials robust to extreme environments. Understanding and improving these materials is key to the development of advanced hypersonic devices (including weapons and anti-weapons), to undersea devices (including naval defense), and to implantable medical technologies.

c. Innovative health and medicine technologies, including ground-breaking work on cryopreservation of living tissue which would enable development of organ banks to prepare for life-saving organ transplants. These technologies are being developed in close coordination with companies to accelerate translation of the innovations into safe and effective practices.

d. Advanced artificial intelligence technologies, including new AI methods specifically designed to support farmers and foresters in more effective management of their lands. These technologies are part of the broader international AI race, while also promising to make domestic farming and forestry more cost-effective.

e. Advanced imaging and logistics support for the nation's polar expeditions and research. The University provides not only advanced mapping (which is also used in

national security) but also “on-the-ice” support to American teams during Polar expeditions.

6. Reimbursement of Minnesota’s indirect costs is essential for supporting this research. NSF’s cutting of indirect costs to 15% would seriously jeopardize carrying out the kinds of research projects described in paragraph 5 in the future.

7. Indirect costs include constructing and maintaining state-of-the-art laboratories and other facilities and support services required to meet the current technical requirements of advanced research, and procurement and maintenance of equipment necessary to conduct such research. This includes specialized testing environments, precision instrumentation, compliance and security related tools, and laboratory safety systems. In addition, creating and maintaining shared facilities also saves the federal government substantial money. A single piece of capital equipment (which may be expensive) can be shared across dozens or hundreds of different research projects over its lifetime, reducing the cost of each project while enabling work that would never be feasible without that equipment.

8. For example, with respect to the areas of research described in Paragraph 4:

a. Semiconductor research requires an extensive nanofabrication facility with tens of millions of dollars invested in equipment to support the design, fabrication, and testing of new semiconductors. This equipment must operate in cleanrooms with highly skilled technical staff training that can support the researchers in the proper use of the equipment and maintain chemical and health safety within the whole facility.

b. Materials research requires an extensive set of measurement and testing facilities, including electron microscopes, atomic force probes, X-ray imaging, and much

more. Again, this equipment requires isolated space (e.g., vibration-free floors, avoidance of contaminants) and expert technical staff for training, operation and maintenance.

c. Health research requires a variety of specialized laboratories and equipment, including so-called “wet labs” where chemical and biological research can be conducted safely. These labs have precise requirements on the control over pressure, temperature and humidity to ensure the replicability of the experiments.

d. Artificial intelligence research requires extensive computing resources (including those we operate as a shared resource in the Minnesota Supercomputing Institute) along with expert staff who can support the researchers in the selection and use of the various high-performance computing systems.

e. Polar support requires not only extensive computing (e.g. for processing satellite images) but also high-performance computer networking infrastructure.

9. Physical facilities and compliance costs are one of the largest components of indirect costs. This includes not only the usual costs of constructing and maintaining buildings where research occurs, but the very high costs of outfitting and maintaining specialized laboratory space, which can require special security, advanced HVAC systems, and specialized plumbing, electrical systems and waste management, as well as specialized laboratory equipment. As an example – a materials science laboratory requires chemical hoods, gas supply (e.g. nitrogen, helium), vacuum chambers, electrical furnaces, milling and grinding systems, isostatic presses, etc. This equipment has to be regularly calibrated to ensure their accuracy and compliance with various standards. The features and amount of space available to researchers have a direct and obvious impact on the nature and amount of research that can be done at Minnesota.

10. In addition, indirect costs fund the administration of awards, including staff who ensure compliance with a vast number of regulatory mandates from agencies such as NSF. These mandates serve many important functions, including ensuring research integrity; protecting research subjects; properly managing and disposing of chemical and biological agents and other materials used in research; managing the allocation of funds according to approved contractual requirements; preventing technologies and other sensitive national security information from being inappropriately accessed by foreign adversaries; providing the high level of data storage, and computing environments mandated for regulated data; ensuring compliance with specialized security protocols and safety standards; maintaining facility accreditation and equipment calibration to meet research quality and security standards; and preventing financial conflicts of interest.

11. Recovery of Minnesota's indirect costs is based on predetermined rates that have been contractually negotiated with the federal government. These negotiated agreements allow institutions to make the up-front financial commitments necessary for the construction of specialized research facilities or resources, including investment in highly trained individuals to run those facilities. Minnesota does this with the full expectation that the Federal Government will honor its commitment. If the government fails to honor this commitment, the University is left with a serious deficit that impedes or imperils these facilities or other institutional operational needs.

12. Through FY 2028, the predetermined indirect cost rates are 54% Modified Total Direct Costs (MTDC) for the on-campus organized research, 37% MTDC for other sponsored activities, and 50% for instruction projects. Our Hormel Institute in Austin Minnesota has its

own on-campus Facilities and Administrative (F&A) rate of 59% MTDC. All off-campus rates use a 26% MTDC rate.

13. The effects of a reduction in the indirect cost rate to 15% on awards issued after May 5, 2025 would be devastating. Of the \$387M in direct active NSF funding that Minnesota currently holds, approximately \$291M consisted of payment of total direct costs and an additional \$96M was reimbursement for indirect costs. These totals increase when also accounting for NSF-funded subawards, bringing the combined total of active NSF funding to Minnesota to \$413.4M (\$309.8M total direct plus 103.6M indirect). On an annual basis, of the \$90.5M in NSF cost reimbursement that Minnesota received in FY 2024, approximately \$66.4M consisted of payment of total direct costs and \$24.1M consisted of reimbursement of indirect costs. Similarly, in FY 2025, Minnesota expects to receive \$95M in NSF cost reimbursement (\$69.7M for total direct costs and \$25.3M for indirect costs.) Over the next five years, Minnesota anticipates receiving an average of \$80.9M in reimbursement for total direct costs annually from NSF. Based on the predetermined indirect cost rate of 54% MTDC, which was agreed upon by the federal government as of July 8, 2024, and applying that rate to the direct costs (as modified pursuant to the Code of Federal Regulations), Minnesota reasonably expects to receive approximately \$29.4M in reimbursement for indirect costs on an annual basis over the next five years.

14. If—contrary to what Minnesota has negotiated with the federal government—the indirect cost rate was reduced to 15%, that would significantly reduce Minnesota’s anticipated annual indirect cost recovery. For example, applying the 15% rate to the anticipated modified direct costs over the next five years would result in an increasingly greater reduction each year, ultimately estimated to be a reduction of at least \$21.1M, to \$8.3M in year five.



15. As of today, Minnesota has over 300 proposals outstanding with NSF (proposals that have been submitted, but not yet awarded) and it is filing new proposals every week. The 15% rate cap will make many of these projects untenable in light of the budgetary cost reallocations among competing research projects. This puts the University in an impossible position. If Minnesota tries to use its negotiated indirect cost rate in new proposals, which it believes it is entitled to do, it runs a serious risk of having its proposals rejected and losing the ability to conduct critical research. If, on the other hand, Minnesota were to accede to the unilaterally imposed 15% rate for its proposals, it would be committing to conduct research based on a financially unsustainable model.

16. This reduction would have deeply damaging effects on Minnesota's ability to conduct research. Many of Minnesota's current research projects may be forced to slow down or cease abruptly if forced to apply for renewals at the 15% indirect cost cap. It may also necessarily result in critical staffing reductions. For example:

a. Without appropriate funding we would need to reduce staffing of shared research facilities such as the Minnesota Nano Center and the Characterization Facility; these are highly-skilled staff, many of whom have decades of experience and who would be very difficult to replace.

b. We would also need to reduce support staff associated with research projects (e.g., the indirect cost-paid staff who support accounting, reporting, human subject oversight, animal care, data curation, and other functions), shifting that responsibility to the researchers and in turn reducing their productivity. Ultimately, top scientists will not move to (or stay at) Minnesota if we cannot provide the facilities and the support to conduct world-class research.

c. Some of our projects provide support to other research teams operating in different geographies, so the impact of a reduced infrastructure at Minnesota has far reaching consequences.

17. Minnesota has for decades relied on the payment of indirect costs. And until now, we have been able to rely on the well-established process for negotiating indirect cost rates with the government to inform our budgeting and planning. Operating budgets rely on an estimate of both direct and indirect sponsored funding to plan for annual staffing needs (e.g., post-docs, PhD students, and other research staff), infrastructure support (e.g., IT networks, regulatory compliance, and grant management support), and facility and equipment purchases.

18. In addition to the immediate effects and reliance interests described above, dramatically cutting indirect cost reimbursement would have longer-term effects that are both cumulative and cascading. Indirect costs enable systems, processes and staff that promote lab safety, research security, and key training about NSF regulations and requirements for investigators, staff and students. Indirect costs also cover the costs of review and oversight of human subject protocols, animal subjects, and the use of substances subject to biosafety requirements. Reducing indirect cost funds increases the likelihood that science will be conducted in a less knowledgeable, safe, and secure environment.

19. Minnesota's research also fuels spending in the regional economy, including by driving discoveries that launch new ventures, attract private investment, and make a positive social impact. A reduction in indirect costs to 15% on renewals and new awards would result in a reduction in the programs and services offered to external communities, which will have economic impact on individuals and the region as a whole.

20. The University of Minnesota cannot cover the funding gap itself. While Minnesota maintains an endowment, it is neither feasible nor sustainable for Minnesota to use endowment funds or other revenue sources to offset shortfalls in indirect cost recovery.

21. The majority of the University's endowment is restricted to specific donor-designated purposes, such as scholarships, faculty chairs, and academic programs. For these restricted accounts, the University is not legally permitted to use those funds to cover research infrastructure costs.

22. Even the portion of the endowment that is unrestricted is subject to a carefully managed annual payout, typically around 4.5%, to ensure long-term financial stability for the institution.

23. It is also not feasible or sustainable for Minnesota to use other revenue sources to offset shortfalls in indirect cost recovery. As a non-profit institution, Minnesota reinvests nearly all of its revenue into mission-critical activities, leaving little margin to absorb unexpected funding gaps. In other words, unlike for-profit organizations, Minnesota does not generate significant surpluses that could be redirected without impacting core academic priorities such as educational programs and financial aid support for students. Absorbing the cost of a lower indirect cost rate, even if it were possible, would create long-term budget pressures on Minnesota—which would in turn force reductions in key investments supporting Minnesota's faculty, students, staff, research, and teaching infrastructure, as well as other critical activities needed to maintain Minnesota's academic excellence. So even if Minnesota could "cover" some of the indirect costs previously funded by NSF, it could do so only by negatively affecting other critical goals central to the institution's mission.

24. If Minnesota’s NSF grants are terminated for failure to accept the new indirect cost rate cap – a risk that the majority of our NSF grants would face, given the impossibility of carrying out most of our research projects under the 15% cap – the harms described herein would be exacerbated. That greater loss in funding from NSF would mean more significant cost-cutting measures would need to be adopted—and quickly. Minnesota cannot “float” all of the NSF grants it would likely lose, so some research projects would need to be terminated altogether, and others would need to be scaled down or pared back significantly. The process of identifying these cuts would need to begin immediately, and layoffs, closures, and research pauses or contractions would follow soon thereafter. Cutting back on Minnesota’s research in fields such as semiconductors, artificial intelligence, space, polar geospatial work, quantum, and robotics, will also have long-term implications on national security and the American economy.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on May 6, 2025, at Minneapolis, Minnesota.

/s/ Shashank Priya  
Shashank Priya